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CURRENT SUPPORT BRIEF

NEW INCENTIVES FOR THE IMPROVEMENT OF TECHNOLOGY IN THE USSR

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NEW INCENTIVES FOR THE IMPROVEMENT OF TECHNOLOGY IN THE USSR

On 3 July 1960, the USSR Council of Ministers issued a decree providing for a series of economic incentives designed to encourage the development and utilization of new technology. 1/ This decree is a belated response to a resolution issued by the CPSU Plenum in June 1959 which instructed Gosplan, the State Committee on Labor and Wages, the Ministry of Finance, the Trade Union Council and the State Committee on Science and Technology to prepare by 1 November 1959 proposals designed to induce Soviet managers, scientists, engineers and production workers to exert greater efforts toward the "mastering of new technology." 2/ The new decree attacks the problem of innovational incentives in several significant ways and should contribute materially to overcoming the traditional reluctance of Soviet managers to innovate.

Provisions of the New Decree

Special Bonuses

The decree provides for one-time bonus payments to wage workers, managers, engineering-technical personnel and scientific workers who are directly connected with the "creation and introduction" of new technology in industrial, construction, transportation and communication enterprises and in geological, scientific, and design organizations. These bonuses, to become effective on 1 October 1960, are to be based on the yearly savings to the national economy, a complicated measure which includes both cost reductions at the plant in question and savings resulting elsewhere in the economy. The new bonus schedule replaces one established under a 1956 Decree which applied only to machine-building ministries.

Schedule of One-Time Bonuses for the Creation and Introduction into Production of New Technology 3/

Yearly Economies Resulting from the New Techniques	Total Funds Authorized for Bonus Payments	
	Up to: (Percent)	But not more than:
100,000 rubles or less	25	20,000 rubles
100,001 - 200,000 rubles	20	35,000 rubles
200,001 - 500,000 rubles	17	60,000 rubles
500,001 - 1,000,000 rubles	12	100,000 rubles
1,000,001 - 5,000,000 rubles	10	350,000 rubles
5,000,001 - 20,000,000 rubles	7	800,000 rubles
20,000,001 - 50,000,000 rubles	4	1,500,000 rubles
Over 50,000,000 rubles	3	2,000,000 rubles

In situations where the savings from new technology cannot be estimated, total bonus payments are limited to 20 percent of the planned wage fund for those workers actively engaged in working on the new technical developments. In addition, persons not classified as wage workers, managers, engineering-technical personnel or scientific workers who actively participate in these technical endeavors may be awarded bonuses, limited to 10 percent of the total award. Unlike the 1956 decree, however, the new decree does not specify the manner in which the total awards will be distributed among those contributing

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to the success of a particular planned project, but stipulates that the State Committee on Labor and Wages, together with Gosplan, the Ministry of Finance and other agencies, are to submit proposals "in two months time" to handle these details. Guide lines probably have already been worked out. 4/ Individual bonus apparently are to be limited to a maximum of sīx months salary for managers and engineering-technical workers in machine-building and in scientific-research and design organizations, and of three months salary for all others, except where high priority is given to a particular projects in which case the six month maximum may be applied.

The bonuses are to be financed by a tax on the enterprise wage funds, which may be treated by the enterprise as a cost of production. The tax rates are as follows:

·	of the Wage Fund
Scientific-research and design organizations	4-8
Machine-building and Metal-working Industries	1.0
Oil, Gas, Metallurgical, Chemical, Electrical Energy, Construction Materials, Timber, Paper	
and Woodworking Industries	0.5
Other branches of Industry and Construction	0.3
Transportation, Communications and Geological	
Survey Work	0.2

The funds are to be controlled by the Sovnarkhozes and Ministries which will estimate the gains to be obtained from proposed techniques and control the system of bonus payments to stimulate action on the desired improvements. In addition, plant managers are permitted to distribute up to 25 percent of the fund from the firm's own tax payments as special rewards for improvements in efficiency and technology which they regard as important. Directors of scientific-research and design organizations may distribute up to 50 percent of the accumulated funds for this purpose.

The Decree also provides that the bonuses for cost reduction and/or plan fulfillment regularly paid to managers and engineering-technical personnel in the machine-building and metal-working industry may be increased up to 50 percent, the size of the increase being dependent upon the planned share of new products in the total.

Changes in the Enterprise Fund

The enterprise fund is formed from fixed percentage deductions from planned and above-plan profits, with annual allocations limited to 5 percent of the wage fund, and is placed at the disposal of managers for certain specified purposes, such as for housing construction for enterprise employees. The 3 July Decree increased the proportion of above-plan profits allocated to the enterprise fund in various industries (now 20 to 50 percent) by amounts up to 10 percent and raised the limit on annual allocations to this fund generally from 5 percent to 5.5 percent of the wage fund for industrial production personnel. In machine-building and metal-

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working plants, the limit was raised from 5 percent to 5.5 to 7.0 percent, varying with the proportion of new products in the total volume of production and, in the first year of series production of a new product in these plants, 10 percent of planned profits is assigned to the enterprise fund instead of the usual 4 percent.

Finally, the decree provides that at least 20 percent of the enterprise fund must be spent for the introduction of new technology, modernization of equipment and the like, at least 40 percent must be spent for improvement of housing and "cultural" facilities for workers, and the remainder may be used for bonuses and for personal toans and grants to individual workers. Under the 1955 provision regulating expenditures from the enterprise fund, 50 percent of the enterprise fund was to be used for introduction of new technology, modernization of equipment, and for construction and repair of living quarters for workers, 5/ but in practice, most of this money was used for housing.

Cost Allocations and Price Formation

The new decree also establishes at the Sovnarkhoz and Ministry level, a fund financed by a tax on the total cost of output in each machine-building and metal-working enterprise. All planned expenditures of enterprises for new technological developments up to the beginning of series production are to be paid for out of this fund, including the cost of the original set of apparatus and equipment necessary for production and the production costs of experimental models or series. Temporary wholesale prices for new equipment will be established at the price level of like-types of old equipment, with adjustments for improvements. Temporary wholesale prices for equipment not similar to older products will be established on the basis of the cost of production (excluding research and development costs) plus a planned 5 percent profit. These provisions become effective on 1 January 1961.

Some Probable Effects of the New Incentives

Through its many-sided approach to the problem of creating economic stimuli to encourage innovation, the new decree should make a significant contribution to solution of the long-standing problem—the Soviet managers' normal reactions to a system which emphasized fulfillment of the output plan above all else. Another major step already had been taken in 1959 with the adoption of a new system of bonuses for managers, which tied their incomes directly to cost reduction. 6/ By minimizing the costs of innovation to the individual enterprise and improving the pricing of new machinery and equipment, the 3 July Decree will increase the effectiveness of the 1959 bonus revision.

The extension of the special bonuses for technological innovation to all branches of industry should encourage technical progress in two new and important ways: (1) all enterprises in a particular branch are taxed uniformly to provide funds for the bonus payments but the payments are distributed only to those enterprises that innovate; (2) enterprise managers are given funds of considerable size with which to reward plant personnel who innovate.

The provisions concerning the enterprise fund work in a similar direction. The managers will be further encouraged to maximize profits, since within limits they will obtain more money to dispense at their discretion in ways that make the job of running the enterprise easier but at the same time a portion of the fund must be used for technological improvements.

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Probably the most significant provisions of the decree are those relating to the method of financing the costs to machinery and metalworking enterprises of introducing new technology and to the setting of prices for new machinery and equipment. At present all of the risks fall on the innovating enterprise, since research and development expenses have been treated as a cost of production for the enterprise, which the plant attempted to write off as fast as possible often in as little as two to three years. This method was reflected in the high prices set for new machinery and equipment relative to older models of a similar kind. Thus, managers resisted change both as potential producers of new machinery and equipment and as potential purchasers of it. Under the new arrangements all the plants in a given area will be taxed to provide the funds from which the research and development costs incurred by innovating enterprises will be paid. The new provision for increasing the regular bonuses of managerial-technical employees in machine-building and metal-working plants producing new products will provide additional incentives. Finally, the relatively lower prices to be fixed for new products will encourage their wider use.

The probable success of the new decree will increase the need for more rational and comprehensive planning. By taking into account the so-called "economic efficiency"--over-all gains or losses from introducing new equipment--Soviet planners hope to be able to direct investment resources into areas of maximum net benefit. To do this, however, more attention must be paid to the related problems of investment criteria and the "costs" of new investment, including interest, obsolescence, insurance, and sales promotion customarily neglected in Soviet practice. 7/ These subjects, already under intense discussion in the USSR, will become particularly pressing under the impact of the new system. To the extent that enterprise managers are stimulated to produce lower-cost equipment, the new system also will increase demand for a larger total inventory of capital equipment than anticipated under present conditions. Some rational means for assigning priorities and allocating raw and semi-finished materials must be found.

The linking of managerial bonuses to both cost reduction and new technology will stimulate managers, particularly those in the machine-building industries, to lower labor costs through the installation of labor-saving equipment. During the present tight labor market period, these activities will provide welcome relief, and displaced workers will be "soaked-up" in other areas of the economy. After 1964, however, when the tight labor market situation is eased and when the automation and mechanization program is more fully underway, the problem of absorbing workers displaced by machines may be more difficult. The shorter work week scheduled for 1964-68, should help to solve this problem.

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